

***SENNA BICAPSULARIS* (FABACEAE) ADVENTIVE IN THE USA (TEXAS)**

JASON R. SINGHURST

Wildlife Diversity Program
Texas Parks and Wildlife Department
3000 South IH-35, Suite 100
Austin, Texas 78704
jason.singhurst@tpwd.state.tx.us

JEFFREY N. MINK

Department of Biology
McLennan Community College
1400 College Drive
Waco, Texas 76708

WALTER C. HOLMES

Department of Biology
Baylor University
Waco, Texas 76798-7388
walter_holmes@baylor.edu

ABSTRACT

Senna bicapsularis, a popular ornamental in the lower Gulf Coastal Plain of southeastern United States, is reported as adventive in Port Aransas, Nueces County, Texas. The species a native of tropical America. This appears to be the first report of the species adventive in the continental United States.

KEY WORDS: *Senna*, Fabaceae, Texas, United States, adventive

Senna bicapsularis is a shrub to small tree to 3 meters tall that is considered native to the American tropics. USDA NRCS (2013) included the species as part of the Puerto Rican flora, but this apparently is the first report of the species being adventive in the continental USA.

Vouchers. Texas. Nueces Co.: Port Aransas, 0.4 mi W of the jct of E. Cotter Rd. at Port Aransas south jetty, in low dune adjacent to jetty, 5 Dec 2012, *Singhurst 19319* (BAYLU); remnant sand dune at South Jetty of the Corpus Christi Ship Channel and “Pelican” Jetty, just off the northwest edge of the University of Texas Marine Science Institute, fruit collection (same location as above), 30 Jul 2013, *Holmes 15941* (BAYLU); same location (flower collection), 9 Oct 2013, *Holmes 15943* (BAYLU).

The species is characterized by its yellow flowers of about 1.5 cm wide, each consisting of five petals and seven fertile stamens. Legumes are more or less cylindrical, up to ca. 10 cm long and contain shiny brown seeds. Leaves normally possess three pairs of obovate to orbicular leaflets, with the lowest pair bearing a clavate to ovoid gland on the upper side of the rachis between the opposite leaflets (Bailey 1949; Chen et al. 2010). This latter trait appears to hold in immature and reproductive materials, but additional glands develop between the opposite upper leaflets on older specimens (as in *Holmes 15941*, BAYLU). The species is widely cultivated and naturalized in the tropics and some warmer areas worldwide (USDA/ARS-grin 2013). In the USA, the species is used as an ornamental, particularly in the southeastern coastal plain, being popular, in part, for its autumn flowering. Common names are Christmasbush, Christmas senna, and winter cassia, from the original generic name, *Cassia* (Johnson 2003, as to names only).



Figure 1. *Senna bicapsularis* in Nueces Co., Texas, *Holmes 15943*. Photo by W.C. Holmes, 9 Oct 2013.

The *Senna* was discovered by Singhurst on a remnant dune bordering the Corpus Christi Ship Channel (Aransas Pass) seawall in Port Aransas, Nueces County, Texas. The area is located in the middle part of the Texas Gulf Coast. The site was also visited by Holmes in July and October, 2013, for additional studies to facilitate identification and collection of additional specimens. The population of *S. bicapsularis* was estimated to consist of about eight plants. The shrubs attained a height of 1–1.5 m, each having a spreading growth form. Indications are that the species presents little or no potential invasive problems.

The dune is located on the northwest end of a narrow (ca. 15 m), elongated dune wedged between the seawall [which is oriented at an angle of ca. 300°] and the University of Texas Marine Science Institute. The end of the dune is bordered by a channel to an inland marina with the embankment slope protected by riprap. The southwest edge of the dune borders level sandy land that is maintained in low grasses. Elevation ranges from near sea level to 1.8 m. In general, the vegetation is moderately to heavily disturbed.

The site of occurrence (at end of dune) is dominated by *Schinus terebinthifolius*, which is a major invasive species of the Texas coast (Billings, undated). Other woody or semiwoody species include *Lantana urticoides* and *Borrchia frutescens*. Herbaceous vining plants are *Ipomoea pes-caprae*, *I. imperati*, and *Rhynchosia americana*. Common herbs are *Ambrosia psilostachya*, *Helianthus argyophyllus*, *Heterotheca subaxillaris*, and *Sida* spp. Important grasses include *Andropogon glomeratus*, *Schizachyrium scoparium* var. *littorale*, *Panicum amarum*, and *Pennisetum ciliare*.

ACKNOWLEDGEMENTS

We are grateful to Guy Nesom for review and editing.

LITERATURE CITED

- Bailey, L.H. 1949. Manual of Cultivated Plants. Macmillan Co., New York.
- Billings, R.F. undated. The invasive Brazilian pepper-tree threatens Texas' coastal habitat. http://www.texasinvasives.org/resources/publications/TFS_Brazilian_Pepper.pdf > Accessed 5 December 2013.
- Chen, D., D. Zhang, and K. Larsen. 2010. *Senna* (Fabaceae). Flora of China 10: 28–33.
- Johnson, K. 2003. Winteria Cassia is worth the search. Mississippi Gardens Newsletter Archives. <http://msucare.com/lawn/garden/msgardens/03/031110.html>
- USDA/ARS-grin. 2013. Germplasm Resources Information Network. <http://www.ars-grin.gov> > Accessed 31 Oct 2013.
- USDA, NRCS. 2013. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina. <http://plants.usda.gov> > Accessed December 2013.